

Report on the Workshop on Nuclear Data Needs for Generation IV Systems

BNL, April 24-25, 2003

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Annual Meeting of the Cross Section Evaluation Working Group

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Nuclear Data Needs for Gen IV: Workshop, April 24-25, 2003, BNL

■ Organization

- Organized by Temitope Taiwo (ANL)
- Chaired by Hussein Khalil (ANL) – Gen IV National Technical Director for System Design
- Hosted by NNDC (Pavel Oblozinsky)
- Attended by 25 reactor and data experts
- Minutes including all presentations available on CD produced by the NNDC (~ 50 copies distributed shortly after the Workshop)

■ Agenda

- Data Needs for Gen IV (presentations by ANL, INEEL)
- Processing, Applications and Validation (LANL, ORNL)
- Theory and Evaluation (BNL, NCSU)
- Nuclear Data Measurements (LANL, ORNL, INEEL/ANL, RPI)
- Recommendations

Nuclear Data Needs for Gen IV: Conclusions

■ CSEWG role recognized

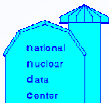
- Nuclear data methodology well established
- 5-step CSEWG process -- data needs, measurements, evaluation, processing, validation

■ Data needs

- Strong emphasis on sensitivity analysis and assessment of uncertainties
- High burn-up operation requires re-evaluation for some transuranics
- Fast spectrum systems require new data for minor actinides

■ Measurements

- Strong need for maintenance of US experimental capabilities
- Mechanism needed for maintenance and distribution of samples



Nuclear Data Needs for Gen IV: Conclusions ctn'd

■ Evaluations

- Strong need for tools to generate covariance data
- Application oriented approach for covariances was emphasized
- New evaluations should be incorporated into ENDF/B-VII

■ Processing

- Covariances needed in multigroup format of direct use to reactor system designers

■ Validation

- High priority: Need to identify existing integral data relevant to Gen IV

■ Organizational matters

- Future Workshops foreseen
- Nuclear Data Advisory Group for Gen IV recommended (similar to NDAG for DOE-NNSA)
- DOE-NE should resume support for CSEWG (CSEWG should become an overall coordinator)

